



US006259405B1

(12) **United States Patent**  
Stewart et al.

(10) **Patent No.:** US 6,259,405 B1  
(45) **Date of Patent:** \*Jul. 10, 2001

(54) **GEOGRAPHIC BASED COMMUNICATIONS SERVICE**

(75) **Inventors:** Brett B. Stewart; James Thompson,  
both of Austin, TX (US)

(73) **Assignee:** Wayport, Inc., Austin, TX (US)

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) **Appl. No.:** 09/433,817

(22) **Filed:** Nov. 3, 1999

**Related U.S. Application Data**

(63) Continuation-in-part of application No. 09/382,551, filed on Aug. 25, 1999, which is a continuation of application No. 09/186,131, filed on Nov. 4, 1998, now Pat. No. 5,969,678, which is a continuation of application No. 08/470,004, filed on Jun. 6, 1995, now Pat. No. 5,835,061.

(51) **Int. Cl.<sup>7</sup>** ..... G01S 3/02

(52) **U.S. Cl.** ..... 342/457; 342/463

(58) **Field of Search** ..... 342/450, 457,  
342/463, 464; 701/207, 208

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,845,504	7/1989	Robert et al. .	
5,095,532	3/1992	Mardus .	
5,185,857	2/1993	Rozmanith et al. .	
5,223,844 *	6/1993	Mansell et al. ....	342/357
5,243,652	9/1993	Teare et al. .	
5,365,516	11/1994	Jandrell .	
5,432,841	7/1995	Rimer .	
5,487,103	1/1996	Richardson et al. .	
5,504,482 *	4/1996	Schreder .....	340/995
5,511,233	4/1996	Otten .	

(List continued on next page.)

**OTHER PUBLICATIONS**

Bill N. Schilit and Marvin M. Theimer, *Disseminating Active Map Information Mobile Hosts*, IEEE Network, Sep./Oct. 1994.

(List continued on next page.)

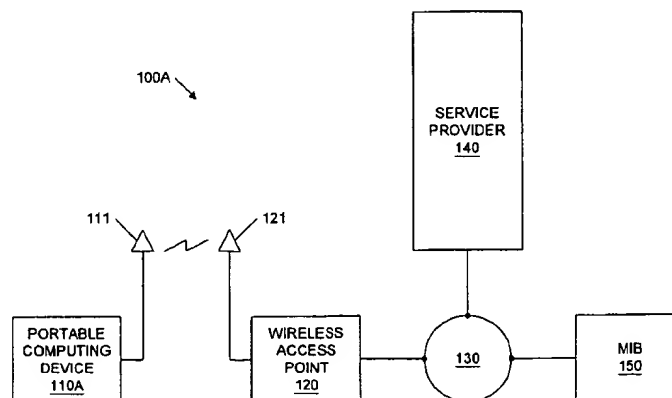
*Primary Examiner*—Dao Phan

(74) *Attorney, Agent, or Firm*—Conley, Rose & Tayon, PC; Jeffrey C. Hood

(57) **ABSTRACT**

A geographic based communications service system that includes a network and a plurality of access points connected to the network and arranged at known locations in a geographic region. One or more service providers or information providers may be connected to the network to provide services or information on the network. A mobile user (MU) may use a portable computing device (PCD) to connect to the network and access information or services from the network. The PCD may be configured to transmit a signal indicating a presence of the PCD as well as identification information indicating the mobile user. Upon detection of the wireless signal by a first access point in proximity to the PCD, and upon receipt of the identification information indicating the user of the PCD, the first access point may transmit the identification information, as well as the known geographic location of the first access point, to one or more providers on the network. The known geographic location of the first access point indicates the approximate location of the PCD of the mobile user. A first information provider may receive this information and provide content information or services to the mobile user. For example, the first information provider may select content information dependent upon the known geographic location of the first access point and demographic information or past activities of the mobile user of the PCD. The first information provider may then provide the selected content information through the network and through the first access point to the PCD of the mobile user.

**49 Claims, 23 Drawing Sheets**





US006675017B1

(12) **United States Patent**  
Zellner et al.

(10) **Patent No.:** US 6,675,017 B1  
(45) **Date of Patent:** Jan. 6, 2004

(54) **LOCATION BLOCKING SERVICE FOR WIRELESS NETWORKS**

6,377,810 B1 \* 4/2002 Geiger et al. .... 455/456  
6,505,048 B1 \* 1/2003 Moles et al. .... 455/456

(75) **Inventors:** Samuel N. Zellner, Dunwoody, GA (US); Mark J. Enzmann, Roswell, GA (US); Robert T. Moton, Jr., Alpharetta, GA (US)

(73) **Assignee:** BellSouth Intellectual Property Corporation, Wilmington, DE (US)

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 518 days.

(21) **Appl. No.:** 09/606,534

(22) **Filed:** Jun. 30, 2000

(51) **Int. Cl.<sup>7</sup>** ..... H04Q 7/20

(52) **U.S. Cl.** ..... 455/456; 455/433; 455/445; 455/432.3; 455/414.1; 455/414.2; 455/414.3; 379/142.02; 379/142.1; 379/142.17; 379/246; 379/247; 379/127.1

(58) **Field of Search** ..... 455/432, 433, 455/445, 414, 456; 342/357; 379/142.02, 142.1, 142.17, 246, 247, 127.01

(56) **References Cited**

#### U.S. PATENT DOCUMENTS

5,512,908 A 4/1996 Herrick  
5,588,042 A 12/1996 Comer  
5,610,973 A 3/1997 Comer  
5,625,364 A 4/1997 Herrick et al.  
5,663,734 A 9/1997 Krasner  
6,138,003 A \* 10/2000 Kingdon et al. .... 455/410  
6,311,069 B1 \* 10/2001 Havinis et al. .... 455/456

#### OTHER PUBLICATIONS

"Wireless Application Protocol", Oct. 1999 Wireless Internet Today, pp. 1-20.

Mark Moeglein, et al., "An Introduction to Snap Track Server-Aided GPS Technology", available at <http://www.snaptrack.com/atwork.html>.

\* cited by examiner

*Primary Examiner*—Sinh Tran

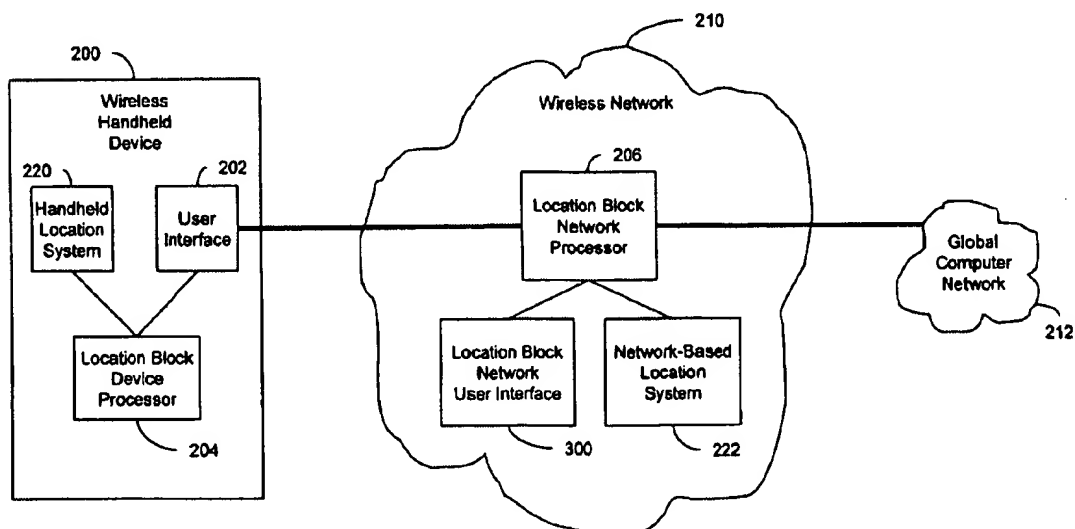
*Assistant Examiner*—David Nguyen

(74) *Attorney, Agent, or Firm*—Shaw Pittman LLP

(57) **ABSTRACT**

The invention disclosed is a location blocking service for use in a wireless network that tracks the location and identity of network users, such as networks complying with enhanced 911 standards. The service provides a network user with the ability to prevent the location of her wireless handheld device from being disclosed to parties other than the wireless network provider and PSAPs (Public Safety Answering Points). The network user blocks the forwarding of location information by signaling to the wireless handheld device when the location information originates from the wireless handheld device, or by signaling to the network when the location information originates from the wireless handheld device or the network. Primary components of the present invention include at least one user interface and at least one location block processor provisioned in the wireless handheld device and/or the wireless network. The user interface prompts the user of the handheld device to enter the commands that the send the signals to the device or network.

9 Claims, 4 Drawing Sheets



File 633:Phil.Inquirer 1983-2004/Feb 20  
(c) 2004 Philadelphia Newspapers Inc  
File 638:Newsday/New York Newsday 1987-2004/Feb 23  
(c) 2004 Newsday Inc.  
File 640:San Francisco Chronicle 1988-2004/Feb 22  
(c) 2004 Chronicle Publ. Co.  
File 641:Rocky Mountain News Jun 1989-2004/Feb 19  
(c) 2004 Scripps Howard News  
File 702:Miami Herald 1983-2004/Feb 20  
(c) 2004 The Miami Herald Publishing Co.  
File 703:USA Today 1989-2004/Feb 21  
(c) 2004 USA Today  
File 704:(Portland)The Oregonian 1989-2004/Feb 20  
(c) 2004 The Oregonian  
File 713:Atlanta J/Const. 1989-2004/Feb 22  
(c) 2004 Atlanta Newspapers  
File 714:(Baltimore) The Sun 1990-2004/Feb 20  
(c) 2004 Baltimore Sun  
File 715:Christian Sci.Mon. 1989-2004/Feb 23  
(c) 2004 Christian Science Monitor  
File 725:(Cleveland)Plain Dealer Aug 1991-2004/Feb 22  
(c) 2004 The Plain Dealer  
File 735:St. Petersburg Times 1989- 2004/Feb 22  
(c) 2004 St. Petersburg Times  
File 477:Irish Times 1999-2004/Feb 23  
(c) 2004 Irish Times  
File 710:Times/Sun.Times(London) Jun 1988-2004/Feb 21  
(c) 2004 Times Newspapers  
File 711:Independent(London) Sep 1988-2004/Feb 23  
(c) 2004 Newspaper Publ. PLC  
\*File 711: Use File 757 for full current day's news of the Independent, as  
as well as full coverage of many additional European news sources.  
File 756:Daily/Sunday Telegraph 2000-2004/Feb 23  
(c) 2004 Telegraph Group  
File 757:Mirror Publications/Independent Newspapers 2000-2004/Feb 23  
(c) 2004

Set Items Description

S1 1. "LOCATION SPECIFIC" OR "USER SPECIFIC"  
S2 409679 (MOBILE OR WIRELESS OR CELLULAR) AND (AD OR ADS OR  
ADVERTI-  
S?)  
S3 53880 S2 AND (LOCATION OR PROXIMIT?)  
S4 30763 S3 AND (TARGET OR PROFILE OR IDENTIF?)  
S5 941 S4 AND (LOCATION (W3) SPECIFIC)  
S6 239 S5 AND PD<20001219 (2)  
S7 196 RD (unique items) (1)

(1) considered all

(2) scanned brief summaries

**Gravini, Steve**

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**From:** Miller, Brandon J.  
**Sent:** Tuesday, February 24, 2004 2:00 PM  
**To:** Gravini, Steve  
**Subject:** RE: 09/740,373

Here is the Office Action and take a look at these references: 6,259,405; 6,675,017

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-12, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart in view of Baker and Moon.

Regarding claim 1 Stewart teaches sending an advertisement to a user operating a wireless communication device (see col. 17, lines 52-55). Stewart teaches receiving first information about the identity of the user and receiving second information about a location of a user (see col. 18, lines 32-37). Stewart teaches searching a database containing one of a plurality of user-specific advertisements and a plurality of location-specific advertisements (see col. 16, lines 29-35). Stewart teaches accessing a database containing a plurality of user-specific preferences and identifying one or more preferences in a database that are associated with the user (see col. 16, lines 21-28). Stewart teaches selecting one of the plurality of user-specific advertisements and the plurality of location specific advertisements based on one or more preferences in a database (see col. 25, lines 46-52 and col. 26, lines 42-46). Stewart teaches sending one of a plurality of user-specific advertisements to a

wireless communication device in the form of a message over a communication network (see col. 16, lines 30-35). Stewart teaches sending one of a plurality of location-specific advertisements to a wireless communication device in the form of a message over a communication network without transmitting an indication of the identity of the user (see col. 17, lines 51-56 & 59-60). Stewart does not specifically teach sending an advertisement in the form of a TCP/IP (Transmission Control/Internet Protocol) message or sending a message without transmitting an indication of the location of the user. Baker teaches sending one of a plurality of user-specific and location-specific advertisements to a wireless communication device in the form of a TCP/IP message over a communication network (see col. 6, lines 42-46 & 62-67 and col. 7, lines 12-20). Moon teaches selecting user specific advertisements in a manner that would alleviate privacy concerns by incorporating anonymous association of users to audience information (see col. 4, lines 14-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include sending an advertisement in the form of a TCP/IP (Transmission Control/Internet Protocol) message or sending a message without transmitting an indication of the location of the user because this would allow for secure WEB based distribution of advertisements to wireless communication subscribers.

Regarding claim 3 Stewart, Baker, and Moon teach a device as recited in claim 1 except for receiving the second information about the location of the user that includes obtaining the second information for a fee. Stewart does teach receiving information about the location of a user (see col. 21, lines 50-52). Stewart does teach charging a fee for a provided service (see col. 29, lines 21-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include receiving the second information about the location of the user that includes obtaining the second information for a fee because this would allow for subscriber information used in WEB based distribution of advertisements to be available at a charge.

Regarding claim 4 Stewart, Baker, and Moon teach a device as recited in claim 1 except for receiving the first information about the identity of the user that includes obtaining the first information for a fee. Stewart does teach receiving information about the identity of a user (see col. 18, lines 32-34). Stewart does teach charging a

fee for a provided service (see col. 29, lines 21-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include receiving the second information about the location of the user that includes obtaining the second information for a fee because this would allow for subscriber information used in WEB based distribution of advertisements to be available at a charge.

Regarding claim 5 Stewart teaches receiving information about the identity of a user that includes obtaining information from a user when the user registers for a service that provides one or more user-specific advertisements to the user (see col. 10, lines 8-18 and col. 12, lines 40-45).

Regarding claim 6 Stewart teaches receiving information about the identity of a user that is accomplished by extracting information from a message transmitted by a wireless communication device (see col. 12, lines 1-8).

Regarding claim 7 Stewart teaches information about the identity of the user that includes information about the location of a user (see col. 18, lines 32-37). Stewart teaches sending one of a plurality of user-specific advertisements to a wireless communication device (see col. 17, lines 52-55). Stewart does not specifically teach sending one of a plurality of user-specific advertisements to a wireless communication device without transmitting an indication of the location of the user therewith. Moon teaches selecting user specific advertisements in a manner that would alleviate privacy concerns by incorporating anonymous association of users to audience information (see col. 4, lines 14-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include sending one of a plurality of user-specific advertisements to a wireless communication device without transmitting an indication of the location of the user therewith because this would allow for secure WEB based distribution of advertisements to wireless communication subscribers.

Regarding claim 8 Stewart teaches information about the identity of the user that excludes information about a location of a user (see col. 22, lines 37-41).

Regarding claim 9 Stewart teaches accessing and searching a database, and matching the identity of a user received against each of a plurality of identities stored in a database to determine which of the plurality of user-specific advertisements is associated with a user (see col. 16, lines 30-35).

Regarding claim 10 Stewart teaches a communications network that includes the Internet (see col. 9, lines 35-38).

Regarding claim 11 Stewart teaches receiving information about a location of a user (see col. 21, lines 50-52). Stewart teaches accessing a database containing one of a plurality of location-specific preferences and identifying one or more location-specific preferences in a database that are associated with the location of a user (see col. 27, lines 17-22). Stewart teaches selecting one of a plurality of user-specific advertisements based on location-specific information (see col. 27, lines 6-13). Stewart teaches sending one of a plurality of user-specific advertisements to a wireless communication device in the form of a message over a communication network (see col. 16, lines 30-35). Stewart does not specifically teach sending an advertisement in the form of a TCP/IP (Transmission Control/Internet Protocol) message or sending a message without transmitting an indication of the location of the user. Baker teaches sending one of a plurality of user-specific and location-specific advertisements to a wireless communication device in the form of a TCP/IP message over a communication network (see col. 6, lines 42-46 & 62-67 and col. 7, lines 12-20). Moon teaches selecting user specific advertisements in a manner that would alleviate privacy concerns by incorporating anonymous association of users to audience information (see col. 4, lines 14-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include sending an advertisement in the form of a TCP/IP (Transmission Control/Internet Protocol) message or sending a message without transmitting an indication of the location of the user because this would allow for secure WEB based distribution of advertisements to wireless communication subscribers.

Regarding claim 12 Stewart, Baker, and Moon teach a device as recited in claim 3 and is rejected given the same reasoning as above.

Regarding claim 18 Stewart and Moon teach a device as recited in claim 13 except for allowing a user to unblock over the Internet the transmission of a second information about the location of a user. Baker does teach a user with the ability to turn off and on location information using a WEB page (see col. 4, lines 26-29 & 44-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to

make the device adapt to include allowing a user to unblock over the Internet the transmission of second information about the location of a user because this would allow for direct communication between a WEB based advertisement distributor and a wireless subscriber.

Regarding claim 20 Stewart and Moon teach a device as recited in claim 13 except for one of the plurality of user-specific advertisements that is sent over a communication network in the form of a TCP/IP (Transmission Control Protocol/Internet Protocol) message. Baker teaches sending one of a plurality of user-specific and location-specific advertisements to a wireless communication device in the form of a TCP/IP message over a communication network (see col. 6, lines 42-46 & 62-67 and col. 7, lines 12-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include one of the plurality of user-specific advertisements that is sent over a communication network in the form of a TCP/IP (Transmission Control Protocol/Internet Protocol) message because this would allow for secure WEB based distribution of advertisements to wireless communication subscribers.

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart in view of Moon.

Regarding claim 13 Stewart teaches sending an advertisement over a communication network to a user operating a wireless communication device (see col. 17, lines 52-55). Stewart teaches receiving first information about the identity of the user and receiving second information about a location of a user (see col. 18, lines 32-37). Stewart teaches searching a database containing one of a plurality of user-specific advertisements and a plurality of location-specific advertisements (see col. 16, lines 29-35). Stewart teaches selecting one of the plurality of user-specific advertisements and the plurality of location specific advertisements based on one or more criteria pre-selected by a user (see col. 25, lines 46-52 and col. 26, lines 42-46). Stewart teaches sending one of a plurality of user-specific advertisements to a wireless communication device in the form of a message over a communication network (see col. 16, lines 30-35). Stewart teaches sending one of a plurality of location-specific advertisements to a wireless communication device in the form of a message over a communication network without transmitting an indication of the identity of the user (see col. 17, lines 51-56 & 59-60). Stewart does not specifically teach sending a message without transmitting an indication of the location of the user.



Moon teaches selecting user specific advertisements in a manner that would alleviate privacy concerns by incorporating anonymous association of users to audience information (see col. 4, lines 14-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include sending a message without transmitting an indication of the location of the user because this would allow for secure WEB based distribution of advertisements to wireless communication subscribers.

Regarding claim 14 Stewart teaches receiving information about the identity of a user that is accomplished by obtaining the information from an information provider (see col. 21, lines 64-67 and col. 22, lines 5-10).

Regarding claim 15 Stewart and Moon teach a device as recited in claim 14 except for receiving the first information about the identity of the user that includes obtaining the first information for a fee. Stewart does teach receiving information about the identity of a user (see col. 18, lines 32-34). Stewart does teach charging a fee for a provided service (see col. 29, lines 21-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include receiving the second information about the location of the user that includes obtaining the second information for a fee because this would allow for subscriber information used in WEB based distribution of advertisements to be available at a charge.

Regarding claim 16 Stewart teaches receiving information about the location of a user that is accomplished by obtaining the information from an information provider (see col. 21, lines 50-55 and col. 22, lines 5-7).

Regarding claim 17 Stewart teaches selecting one of a plurality of user-specific advertisements including, receiving one or more criteria from a user, storing the one or more criteria received from a user in a database, and consulting the one or more criteria while selecting one of the plurality of user-specific advertisements (see col. 25, lines 48-52 & 63-65 and col. 26, lines 42-46).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart in view of Moon and Hidary.

Regarding claim 19 Stewart and Moon teach a device as recited in claim 13 except for disclosing

information about the location of a user to an emergency service provider when a user requests emergency help. Hidayi does teach providing an emergency channel to an emergency service provider when a user requests emergency help (see col. 2, lines 57-62). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include disclosing information about the location of a user to an emergency service provider when a user requests emergency help because this would allow for WEB based distribution of advertisements to bypassed during an emergency situation.

-----Original Message-----

**From:** Gravini, Steve  
**Sent:** Monday, February 23, 2004 1:56 PM  
**To:** Miller, Brandon J.  
**Subject:** 09/740,373

Would it be possible to e-mail your Office action for the your docketed subject named application?

Co-pending application 09/740,375 on my docket, claims the exact same subject matter except it uses location-specific advertisements instead of user-specific advertisements.

Thanks and have a great day!

Steve Gravini  
p/3622